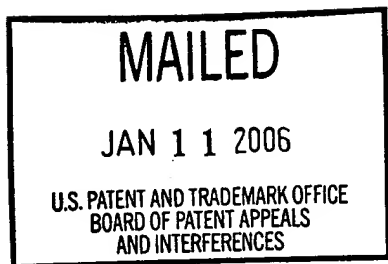


The opinion in support of the decision being entered today was not written for publication and is not binding precedent of the Board.

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE BOARD OF PATENT APPEALS
AND INTERFERENCES

Ex parte GWO SHIN SWEI



Appeal No. 2005-2098
Application No. 09/810,641

ON BRIEF

Before FRANKFORT, McQUADE, and NASE, Administrative Patent Judges.
FRANKFORT, Administrative Patent Judge.

DECISION ON APPEAL

This is a decision on appeal from the examiner's final rejection of claims 1 through 8, all of the claims pending in the application.

Appellant's invention relates to abrasive discs for use with orbital sanders which are designed for use with integral vacuum exhaust systems. As noted on page 2 of the specification:

The invention provides a circular abrasive disc having a major abrading surface provided with an annular zone, intermediate between the center and the circumference of the circular disc wherein the radial distance from the center of the disc to the annular

zone is from one third to one half of the radius of the disc and the radial distance from the circumference of the disc to the zone is from one quarter to one third the radius of the disc, and, exclusively within the annular zone, a plurality of perforations, each having a diameter less than one quarter the width of the annular zone and being essentially uniformly spaced in the zone such that the distance between any pair of adjacent perforations is less than twice the greatest dimension of either perforation.

Because the annular zone is located where, (in a typical orbital sander with a vacuum device drawing air through exhaust ports), the exhaust ports are also located, the perforations are effective to cooperate with the vacuum device to remove swarf from the surface of the workpiece. Moreover there is no need to orient the disc in any specific manner because, given the distribution and size of the perforations, with conventional sanders having vacuum exhaust devices, at least two are always in register with each exhaust port and several others are in close proximity.

A further understanding of the invention can be derived from a reading of independent claims 1 and 8, a copy of which appears in the Appendix to appellant's brief.

The prior art references relied upon by the examiner in rejecting the appealed claims are:

Marton	4,184,291	Jan. 22, 1980
Gutknecht et al. (Gutknecht)	5,309,682	May 10, 1994
Jöst	5,810,650	Sep. 22, 1998

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Claims 1 through 5, 7 and 8 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Jöst in view of Marton.

Claim 6 stands rejected under 35 U.S.C. § 103(a) as being unpatentable over Jöst in view of Marton and Gutknecht.

Rather than reiterate the examiner's commentary with regard to the above-noted rejections and the conflicting viewpoints advanced by appellant and the examiner regarding the rejections, we make reference to the final rejection (mailed February 24, 2004) and the examiner's answer (mailed October 22, 2004) for the reasoning in support of the rejections, and to appellant's brief (filed July 26, 2004) and reply brief (filed December 13, 2004) for the arguments thereagainst.

OPINION

In reaching our decision in this appeal, we have given careful consideration to appellant's specification and claims, to the applied prior art references, and to the respective positions articulated by appellant and the examiner. As a consequence of our review, we have made the determinations which follow.

Concerning the rejection of claims 1 through 5, 7 and 8 under 35 U.S.C. § 103(a), we direct attention to the final rejection (pages 2-3) and answer for a full understanding of the examiner's position. Beginning with a consideration of independent claim 1, after a review of the applied patents to Jöst and Marton, we agree with appellant that the examiner has not made out a *prima facie* case of obviousness and has improperly based at least part of his suggested modifications of the prior art on hindsight gleaned from first having read appellant's own specification and claims. In particular, while we would support the examiner's conclusion that the collective teachings of Jöst and Marton would have made it obvious to one of ordinary skill in the art at the time of appellant's invention to provide the perforations (8) of Jöst in a distribution and size so as to insure that at least two perforations are in register with each exhaust port (7) of the support member (5/6) so as to thereby insure unhindered suction of abrasive dust away from the grinding surface, we find no basis whatsoever for the examiner's attempt to then eliminate all of the perforations in the grinding disc (1) of Jöst except those that would provide an annular zone of perforations, and thus an abrasive disc, like that specifically defined in appellant's claim 1.

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The examiner's contention that the pattern of distribution of perforations across the disc in Jöst, particularly those located outside the exhaust ports of the sander, is not critical or otherwise important to the invention therein is belied by the disclosure of that patent at column 2, lines 20-30. As for the examiner's assertion that appellant has not addressed any advantage to not having perforations outside the annular zone defined in claim 1 on appeal, we agree with appellant's comments set forth on page 2 of the reply brief.

In light of the foregoing, we will not sustain the examiner's rejection of claim 1 under 35 U.S.C. § 103(a) as being unpatentable over Jöst in view of Marton. Nor will we sustain the § 103 rejection of claims 2 through 5 and 7 which are dependent from claim 1.

Regarding the rejection of dependent claim 6 under 35 U.S.C. § 103(a) as being unpatentable over Jöst in view of Marton and Gutknecht, we have reviewed the patent to Gutknecht, but find nothing therein which makes up for or otherwise overcomes the

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deficiencies noted above in the basic combination of Jöst and Marton. Thus, the examiner's rejection of claim 6 under 35 U.S.C. § 103(a) will not be sustained.

However, we reach a contrary conclusion with respect to the rejection of independent claim 8 under 35 U.S.C. § 103(a) as being unpatentable over Jöst in view of Marton. Claim 8 does not recite the "annular zone" and the particular construction of the abrasive disc with the specificity set forth in claim 1 on appeal. As we noted *supra*, we agree with the examiner's conclusion that the collective teachings of Jöst and Marton would have made it obvious to one of ordinary skill in the art at the time of appellant's invention to provide the perforations (8) of Jöst in a distribution and size so as to insure that at least two perforations are in register with each exhaust port (7) of the support member (5/6) so as to thereby insure unhindered suction of abrasive dust away from the grinding surface. This combination would result in a sander system like that in appellant's claim 8 on appeal and, contrary to appellant's assertions in the brief (pages 8-9), would clearly provide a circular abrasive disc having a major abrading surface provided with "an annular zone" having a sufficient plurality of

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perforations so that wherein at least two perforations are in register with each exhaust port on the backing pad or support member (5/6) of Jöst. This claim, unlike claim 1, does not in any way exclude perforations from the remainder of the abrading disc, i.e., from both a central region and a circumferential peripheral region of the disc. Thus, the abrasive disc of Jöst as modified by Marton would have "an annular zone" including a plurality of perforations meeting the requirements of claim 8 on appeal. The examiner's rejection of claim 8 under 35 U.S.C. § 103(a), therefore, is sustained.

The decision of the examiner is accordingly affirmed-in-part.

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David Bennett
NORTON COMPANY
1 New Bond Street
Box Number 15138
Worcester, MA 01615-0138

CEF/jrg